

We claim:

1. A method of laser drilling a vibrating workpiece, comprising:

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providing a workpiece engaged by a frame of a vibrating machine, wherein the workpiece is vibrating substantially in unison with the frame;

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providing a laser apparatus mounted to a second frame that is substantially isolated from the vibrating frame;

providing a spherical focusing lens that is mounted to the first frame;

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aligning the laser apparatus and the spherical lens such that a laser beam emitted by the laser is directed to a target location on the vibrating workpiece; and,

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causing the laser to emit a beam through the spherical lens, wherein the beam strikes the vibrating workpiece at the target location.

2. The method of claim 1, wherein the laser comprises an Nd-Yag laser.

3. The method of claim 1, wherein the workpiece comprises a surgical needle.

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4. The method of claim 1, wherein the laser beam is pulsed.

5. The method of claim 1, wherein the workpiece is mounted to a fixture which is mounted to the machine frame.

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6. An apparatus for laser drilling a vibrating workpiece, comprising:

a workpiece mounted to a vibrating frame;

a laser apparatus mounted to a second frame, wherein the second frame is substantially isolated from the vibrating frame; and,

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a spherical focusing lens mounted to the vibrating frame for directing a laser beam emitted by the laser to a target site on the workpiece.

7. The apparatus of claim 6, wherein the laser comprises an Nd-Yag laser.

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8. The apparatus of claim 6 wherein the workpiece comprises a surgical needle.